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IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1   1.   (currently amended)   A method of analyzing a plurality of network elements
2   configured to support at least one established communication path in a network, the
3   method characteristics comprising the steps of:
4   querying a network element in a communication the network for local network
5   information;
6   receiving the local network information from the network element in response to
7   querying, the local network information comprising one or more items selected from the
8   group including topology information, connection information, and performance
9   information;
10   analyzing the local network information received to map [[a]] an established
11   communication path established in the network;
12   responsive to the local network information received and the established
13   communication path mapped in the analyzing step, selecting a next network element of
14   the established communication path for querying; and
15   if the next network element has been selected, iterating the method from the
16   querying step for the next network element.

1   2.   (original)   The method as defined in claim 1 further comprising the step of
2   receiving a notification signal from one or more network elements, the notification signal
3   indicative of a network event, and wherein the step of querying is initiated in response to
4   receiving said notification signal.

1   3.   (original)   The method as defined in claim 1 further comprising the step of
2   determining network capacity using communication path data from the analyzing step.

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1 4.   (original) The method as defined in claim 1 further comprising the step of

2 determining network performance using the communication path data from the analyzing

3 step.

1 5.   (original) The method as defined in claim 1 further comprising the step of

2 detecting network faults using communication path data from the analyzing step.

1 6.   (original) The method as defined in claim 1 wherein the topology information

2 includes a routing table and wherein the connection information includes a connection

3 table.

1 7.   (cancelled)

1 8.   (cancelled)

1 9.   (cancelled)

1 10.   (cancelled)

1 11.   (cancelled)

1 12.   (cancelled)

1 13.   (currently amended) A method for analyzing a plurality of network elements

2 configured to support at least one established communication path of a network, the

3 method characteristics comprising the steps of:

4   receiving a notification signal from a network element, said notification signal

5 indicative of a new established communication path set up by the network element in the

6 network, [[and]] said notification signal including circuit identifier information;

7   querying [[a]] the network element in a communication the network for

8 connection information;

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9   receiving the connection information from the network element in response to

10 querying;

11   comparing the connection information with the circuit identifier information to

12 determine a match condition; <u>and</u>

13   if the match condition occurs in the comparing step<u>:</u>[[,]]

14   querying the network element for routing information;

15   receiving <u>the</u> routing information from the network element;

16   analyzing the routing information received to map the new <u>established</u>

17 communication path ~~established~~ in the network;

18   selecting a next network element to query along the new <u>established</u>

19 communication path; <u>and</u>

20   if the next network element has been selected, fetching from the received

21 circuit identifier information <u>circuit identifier information</u> associated with the next

22 network element and iterating the method from the step of querying for the next

23 network element.

1   14.   (<u>currently amended</u>)   The method as defined in claim 1 further <u>comprising:</u>

2 ~~including the step of~~

3   storing <u>communication path data of</u> the <u>established</u> communication path

4 ~~established through the communication~~ <u>in the</u> network.

1   15.   (cancelled)

1   16.   (currently amended)   The method as defined in claim 13 further <u>comprising:</u>

2 ~~including the step of~~

3   storing <u>communication path data of</u> the <u>established</u> communication path

4 ~~established through the communication~~ <u>in the</u> network.

1   17.   (previously presented)   Apparatus for analyzing ~~network characteristics in a~~

2 ~~network including~~ a plurality of network elements interconnected ~~together~~ to form a

3 communication network <u>and configured to support at least one established</u>

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4 communication path in the communication network, the apparatus comprising:

5   means for querying a network element in the communication network for local

6 network information, the local network information comprising one or more items

7 selected from the group including topology information, connection information, and

8 performance information;

9   means, responsive to receipt of the local network information, for analyzing the

·10 local network information received to map [[a]] an established communication path

11 established in of the network; and

12   means, responsive to the local network information received and the established

13 communication path mapped in the analyzing means, for selecting a next network

14 element of the established communication path for querying;

15   wherein the means for querying is responsive to a notification that the next

16 network element has been selected.

1 18.   (original) The apparatus as defined in claim 17 wherein the querying means

2 further comprises means for receiving a notification signal from one or more network

3 elements, the notification signal indicative of a network event, and wherein the querying

4 means is responsive to receiving said notification signal.

1 19.   (currently amended) The apparatus as defined in claim 17 further comprising

2 means for determining network capacity using communication path data of the

3 established communication path from the analyzing means.

1 20.   (currently amended) The apparatus as defined in claim 17 further comprising

2 means for determining network performance using communication path data of the

3 established communication path from the analyzing means.

1 21.   (currently amended) The apparatus as defined in claim 17 further comprising

2 means for detecting network faults using communication path data of the established

3 communication path from the analyzing means.

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1 22.   (original)   The apparatus as defined in claim 17 wherein the topology

2 information includes a routing table and wherein the connection information includes a

3 connection table.

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